

# CAL POLY

M A G A Z I N E

## THE BAKER ERA

31 YEARS IN SUPPORT OF  
LEARN BY DOING

ALSO INSIDE >>

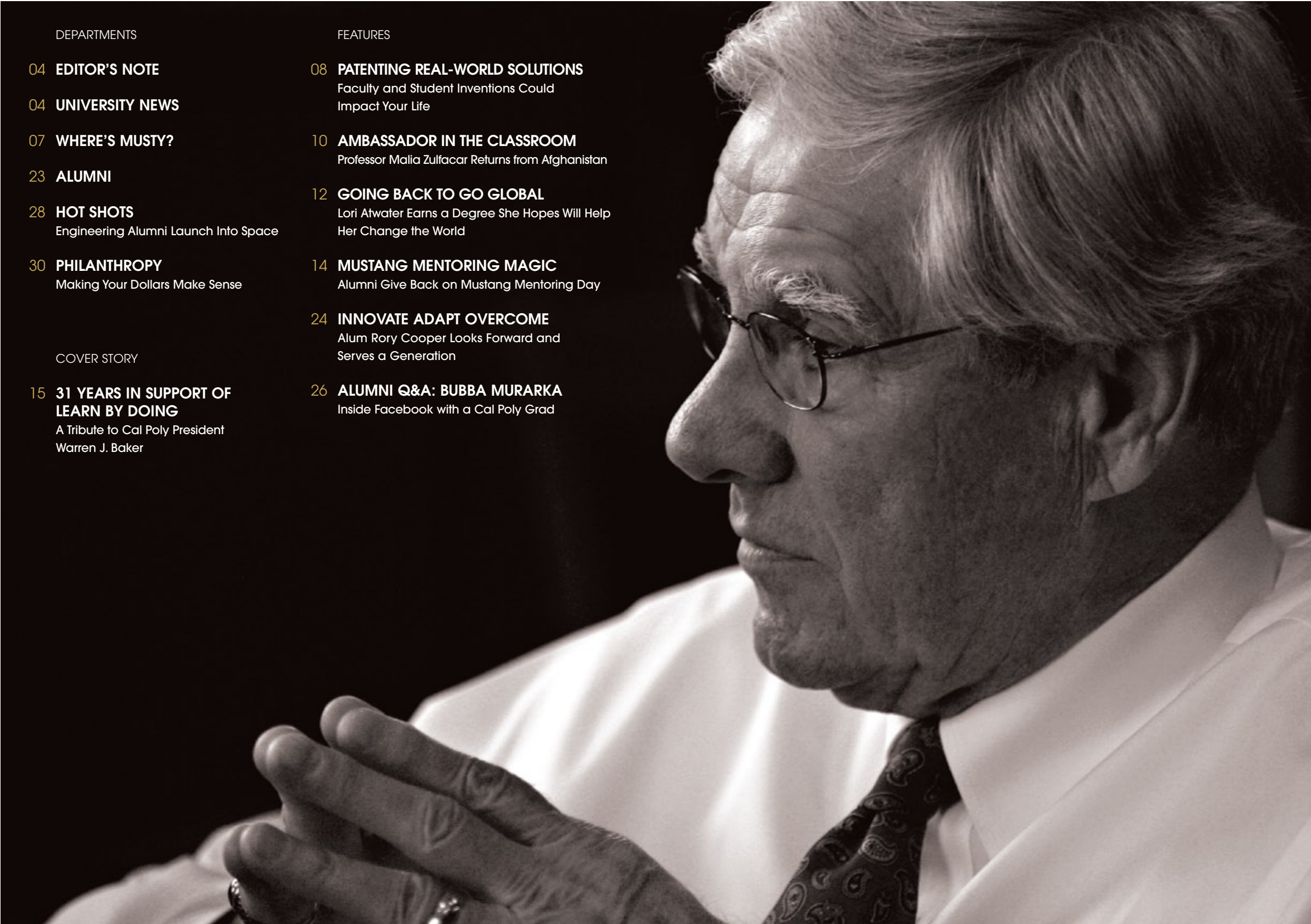
PROFESSOR RETURNS FROM  
AFGHAN AMBASSADOR POST

ENGINEERING ALUMNI  
LAUNCH INTO SPACE

| SPRING 2010 |



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## CAL POLY

M A G A Z I N E

SPRING 2010

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(On Cover) President Warren Baker speaks with students and staff at work on projects in the Bonderson Engineering Center machine shop.  
(Inside) President Baker in his office in February. (Photo by Aaron Lambert.)



# A TRIBUTE TO PRESIDENT BAKER



DEAR FRIENDS:

The challenge in editing Cal Poly Magazine is selecting which great stories to share with you. The sheer abundance of stories about the success students, alumni, faculty and staff, is inspiring – but still, the editor has to decide which stories live or die.

For this issue, it was easy to decide to highlight Warren Baker's 31-year tenure as

Cal Poly president. But deciding on which highlights could be packaged into the magazine? Well ... not so easy.

So we sought presidential guidance, and as you might guess, we learned a few things.

For starters, it was "almost by accident" that Dr. Baker became a university president, let alone stayed for 31 years. In speaking with us recently, he recalled that he never thought academic administration would be his long-term career at all.

"I accidentally got into this at a relatively young age, when I tried out being a dean at a college of engineering," Baker said. "I really thought that I would not stay in the academic world."

"I have an engineering background. I had a consulting background, and I had worked with two or three corporations in that field. I didn't have a plan to be a university president."

But as president, he had a plan – quite a few plans, in fact, that over the years helped Cal Poly blossom in reputation for its learn-by-doing teaching methods and its ability to produce resourceful professionals ready to contribute to the workforce on Day One.

Along the way, Cal Poly became a truly comprehensive polytechnic university, renowned for its scientific and technical curriculum as well as for its distinctive offerings in business and the liberal arts.

Indeed, it was a fortunate accident for Cal Poly that Warren Baker found his way to San Luis Obispo – and stayed.

Now, as he is set to retire once a successor is identified and assumes office sometime in the next few months, we look back on a remarkable 31 years of Cal Poly's growth. □

— Matt Lazier, Editor

## WORK BEGINS ON REC CENTER EXPANSION



CONSTRUCTION BEGAN during winter quarter on the renovation and expansion of the Cal Poly Recreation Center.

Students voted by an overwhelming 75 percent in February 2008 to increase the Student Union fee by \$65 per quarter to fund the expansion project. However, the fee will not be implemented until the facility is complete.

Crews are renovating the men's and women's locker rooms, tripling the center's overall exercise space and adding new components such as an indoor jogging track, a squash court, a multi-purpose activity gym, a leisure pool and deck and an additional sand volleyball court.

The Recreation Center Expansion Project will use current and future best sustainable building practices to ensure that the renovated facility meets and/or exceeds State of California standards for energy efficiency. To the fullest extent possible, LEED credits will be pursued and green building strategies will be incorporated into the project.

Work is expected to continue on the project until summer 2012. For more information, visit [www.asi.calpoly.edu/rec\\_center\\_project](http://www.asi.calpoly.edu/rec_center_project) or call 805-756-2211. □



## WASC ACCREDITATION TEAM VISITS CAL POLY CAMPUS

CAL POLY HOSTED A VISITING TEAM from the Western Association of Schools and Colleges (WASC) Feb. 10-12. The team's visit is part of the process of re-affirming the university's accreditation, a review that happens every 10 years. The WASC team members are faculty and administrators from peer universities.

WASC accreditation is a means of assuring the value of Cal Poly degrees and the university's eligibility for federal funding.

WASC ACCREDITATION IS A MEANS OF ASSURING THE VALUE OF CAL POLY DEGREES AND THE UNIVERSITY'S ELIGIBILITY FOR FEDERAL FUNDING.

Through several open forums, the visiting team sought input from Cal Poly faculty, staff and students on the university and its ability to provide a high-quality education.

In addition, Cal Poly submitted a report to WASC, which President Warren J. Baker called the best he has seen in his 30 years as the university's leader.

"It focuses on very pertinent and important themes and has a real chance of doing considerable good for the institution," Baker said of the report in an email to campus. "I congratulate all involved in the development of this outstanding work of analysis and reflection."

For more information on the WASC process and to read a summary of the report Cal Poly submitted to WASC, visit <http://wasc.calpoly.edu>. □

## PROFESSOR CO-AUTHORS BOOK ON INDIGENOUS SYMBOLS

CAL POLY ETHNIC STUDIES PROFESSOR Kathleen Martin has co-authored the book "Indigenous Symbols and Practices in the Catholic Church: Visual Culture, Missionization and Appropriation," released in February by Ashgate Publishing.

The text focuses on Native American and indigenous people and their relationship with the Roman Catholic Church. It illustrates the effects of appropriation of indigenous symbols, as well as the political, educational and economic oppression of indigenous peoples the authors contend were the result of Christian organizations.

The concept for this volume arose from a visual inspection of Catholic churches and the ways indigenous symbols are employed. Martin visited 50-60 churches on reservations, took 600-700 photographs, and conducted interviews for the project, which includes 17 full-page photographs, personal narratives and data analysis.

The book is available in El Corral Bookstore. □





## CAL POLY STUDENT HOUSING EARNS GOLD CERTIFICATION

CAL POLY'S NEWLY COMPLETED student housing project, Poly Canyon Village, has earned a LEED Gold certification for meeting required standards in sustainable building according to the U.S. Green Building Council.

Poly Canyon Village received certification for meeting 42 of the required 39-51 points to earn the designation. Standards for the designation included low volatile organic compounds material, energy efficient buildings, reduction of water use, water-efficient landscaping, use of recycled content, 90 percent diversion from the landfill of construction waste, and more. Read the USGBC Report. Larry Kelley, Cal Poly's vice president for Administration and Finance, said the LEED gold designation means 25 percent of Cal Poly's facilities are now certified sustainable. "We are really pleased with the award," Kelley said. "The project team, from initial planning to design and through construction, did a great job on this project. Cal Poly students are enjoying Poly Canyon Village and value this new facility on campus."

For more information about Poly Canyon Village, visit <http://polycanyonvillage.calpoly.edu/>. For more information about U.S. Green Building Council and LEED certification, visit <http://www.usgbc.org/>. □



## STUDENT PHILANTHROPY COUNCIL COORDINATES 2009 SENIOR GIFT

THE 2009 SENIOR GIFT – the first fundraising project by the Student Philanthropy Council – was unveiled last fall in the form of a new bike rack outside the Campus Market.

The council was created a year and a half ago at the recommendation of the Cal Poly Foundation Board and is now an official ASI student club.

The mission of the council is to develop a culture of philanthropy among the student body, by educating students about the importance of giving back through private support.

Students raised money for the bike rack through a variety of ways, such as sponsoring a booth at Open House in April.

The group is also traveling statewide to speak at Parent Philanthropy Council events. "We hope to let potential donors know how much we, the students, appreciate their funds and continual support," said council president Sarah Storelli. □

## CAL POLY RECEIVES RECORD NUMBER OF APPLICANTS

CAL POLY RECEIVED A RECORD NUMBER of undergraduate applications for the 2010 fall quarter – a total of 40,904 applications, up 12.1 percent from 36,489 in 2008.

Of the nearly 41,000 first-time freshmen who submitted applications, 4,744 were submitted as early decision applications, or applications for students who made Cal Poly their

'WE ARE REALLY PLEASED WITH THE RESULT, ESPECIALLY GIVEN THE TOUGH ECONOMY AND STATE BUDGET CUTS TO HIGHER EDUCATION.'

first choice. The early decision pool increased by more than 32 percent from last year, a sign of the increasing number of students considering Cal Poly as their first choice.

"The number of applications we received this year is a testament to the hard work of our academic departments in helping my unit build relationships with our prospective students and parents long before the application process ever begins," said James Maraviglia, assistant vice president of Admissions, Recruitment and Financial Aid. "We are really pleased with the result, especially given the tough economy and state budget cuts to higher education." □



## CAL POLY ARCHITECTURE STUDENT RECEIVES NATIONAL RECOGNITION

CAL POLY ARCHITECTURE STUDENT John Vierra won first place and took home \$2,500 in the 2009 Bohemian Flats Boathouse Student Design Competition. The competition was sponsored by the American Institute of Architecture Students (AIAS) in conjunction with The Vinyl Institute.

Vierra, a senior in Cal Poly's Architecture Department, won for his design "Boat on Board."

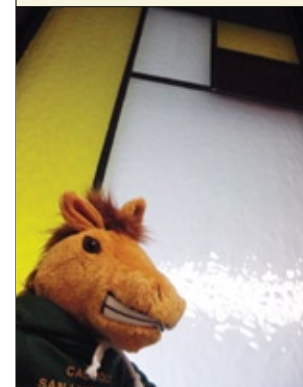
Judges noted the technical exploration, as well as the "ingenious way of dealing with the river's ebb and flow." It was considered one of the most respectful designs with regards to the site and the river.

This year's competition focused on rewarding design excellence at a small-scale, highlighting the unique aspects of designing a boathouse and building knowledge about materials, products and assembly contributing to a sustainable and safe environment. The competition site was The Bohemian Flats, a historic parcel of land on the bank of the Mississippi River in Minneapolis.

Vierra was also the first place winner of the 2008 AIAS Student Competition. □

## WHERE'S MUSTY?

### HOW WELL DO YOU KNOW THE CAL POLY CAMPUS?



OUR MINI-MASCOT, MUSTY THE MUSTANG, went exploring recently and came back with photos from his adventure. Can you tell where on campus he's been?

We'll run one of Musty's photos in each edition of Cal Poly Magazine and let you tell us where Musty is. Send your responses to [mlazier@calpoly.edu](mailto:mlazier@calpoly.edu). Be very specific in your answer.

The correct answer and the name of the first person who submitted it will be printed in this space in the next edition, along with Musty's next photo.

ASI staff member **Brittany Tomasko** was the first to guess the correct answer for our Winter 2009 edition: Musty was in the Natatorium across from Alex G. Spanos Stadium.



# PATENTING REAL-WORLD SOLUTIONS

CAL POLY FACULTY AND STUDENT  
INVENTIONS COULD IMPACT YOUR LIFE

BY STACIA MOMBURG

CAL POLY HOLDS  
11 PATENTS WITH  
THE U.S. PATENT  
AND TRADEMARK  
OFFICE.

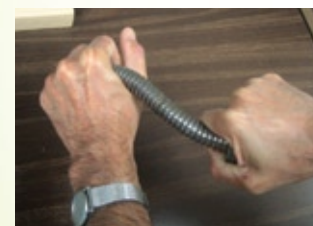
CAL POLY IS KNOWN for having some of the brightest and most academically motivated students in the state and for its faculty's commitment and dedication to student success.

Not so widely known is that some of those faculty and students have invented tools with the potential to make a real difference in our world.

The California Central Coast Research Partnership – or C3RP – under the direction of the Research and Graduate Program Office, is Cal Poly's home to these devices. Jim Dunning is the C3RP project administrator who works to market the patents held by the university. Cal Poly holds 11 patents with the U.S. Patent and Trademark Office.

Among those inventions are a flexible fastener that could revolutionize seismic retrofitting and human joint replacement; a way to purify water in disaster areas; and a way to track produce from grower to shelf, to battle against contamination.

## > MAKING BUILDINGS QUAKE-SAFE



Mechanical Engineering professor Saeed Niku developed the Flexible Fastener, which received a patent in 2005. The fastener looks like an ordinary nut-and-bolt combination. What

sets it apart is a flexible shank that can be made from any strong yet pliable material such as Kevlar, nylon, steel cable or rope.

The threads encircle the core material and are bonded to it at two ends, and a bolt head is added. The fastener holds items together and can be tightened, like a regular bolt. Unlike a regular bolt, though, the fastener can bend and move with whatever it is holding together.

The ability to move laterally makes it ideal in construction and seismic retrofitting. It can connect non-parallel surfaces and can be used to repair products and structures with unaligned holes. It also can be used for earthquake retrofitting, to allow more lateral motion in quake-resistant building materials.

The fastener also is ideal for use in medical applications, such as artificial knee replacement, in which bending is desired between body components while they remain attached.

## > PURIFYING WATER

In the wake of Hurricane Katrina, Trygve Lundquist, a Civil and Environmental Engineering professor, and his students developed the idea of a lightweight water treatment system that could be easily distributed to and used by disaster survivors to treat available water regardless of its quality.

Cal Poly received a patent on a Field Water Purification System in April 2009. The system is the brainchild Lundquist, students Steve Barr and Dan Frost, and former grad student Tricia Compas, who worked on creating a tangible system as part of her graduate thesis.



Their system includes a packet of PUR "Purifier of Water" that can treat 2.5 gallons of water, a cylindrical plastic water-bag, backpack-like straps to transport the system, and a spigot to access the treated water. The beauty of the system is that the water is sealed off and stays clean.

The Clinton Global Initiative and the Walmart Foundation awarded Compas \$14,500 for the invention. In addition, Cal Poly received \$25,000 from the National Collegiate Innovators and Inventors Alliance to further develop usability and effectiveness and work on plans for manufacturing and a corporate infrastructure for the product.

"The U.S. Military is interested in testing the system for use in military disaster relief, ease of use and drinkability of treated water," Dunning said.

## > TRACKING PRODUCE

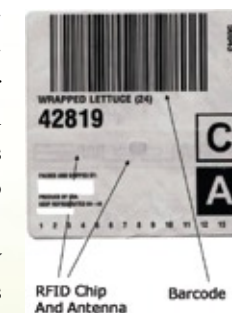
Tali Freed, a professor of Industrial and Manufacturing Engineering, developed the technology for a Radio Frequency Identification (RFID) tag that helps growers track food when it's shipped to distributors.

The RFID, for which Cal Poly received a patent in June 2009, is unique in that it can be hermetically sealed to remain intact long term on reusable plastic containers.

Farmers produce a paper barcode tag that can be affixed over the RFID chip. The tag peels off during the tote sterilization process, and the RFID chip remains on the tote. After each use, a new tag is reprogrammed in the field to match assigned produce barcodes and is affixed over the RFID chip.

The technology allows farmers to track shipments from field to store shelf. If a shipment is contaminated, the farmer can determine where contamination may have occurred to mitigate contamination of future shipments.

Dunning said he's working to license the product to large-scale produce industry. "Retailers tell us they really like the idea and want growers to use the technology," he said. "We're trying to find a creative way to market this to some of our industry partners." □



For more information about C3RP and Cal Poly's current and pending patents, visit [www.c3rp.org/technologies%20available.htm](http://www.c3rp.org/technologies%20available.htm)



# AMBASSADOR IN THE CLASSROOM

## MALIHA ZULFACAR RETURNS FROM DIPLOMATIC POST

BY TERESA MARIANI HENDRIX



SOCIOLOGY PROFESSOR MALIHA ZULFACAR is back in the classroom at Cal Poly, fresh off a three-year stint as the ambassador to Germany for her native country, Afghanistan.

Zulfacar initially didn't tell her students about her time as "madame ambassador."

She started the quarter the usual way: asking her students to guess where she's from. Fluent in German, English and several Afghan dialects, her soft accent is apparently very hard to place.

"This year I got South America, Spain and Portugal," she said. It wasn't until she hinted that she's from "the most troubled country in the world" that they guessed Afghanistan. (The exercise aims to show that "race" is a non-scientific social construct, she said.)

Like every quarter since 2002, the students were shocked. And like every quarter since then, she's told them no, she's not a terrorist, not in the Taliban – and neither are most Afghans.

Instead, she said, Afghanistan is the victim of three decades of war that started with the Russian invasion in 1979. It's a subject with which she's quite familiar. She was a sociology professor at Kabul University when the Russians arrived in tanks. She and her family were among the first wave of refugees who fled to Germany. The exodus continued; Germany now has the largest concentration of Afghan refugees and "second generation" Afghan immigrants in Europe, she explained.

Zulfacar eventually left Germany with her two children, settled in the United States, went on to finish her master's and doctorate degrees, and joined the faculty at Cal Poly.

Before Sept. 11, 2001, the professor was working with educated Afghan women living abroad, trying to improve wom-

'IN 2001, ONLY 3 PERCENT OF LITTLE GIRLS ATTENDED SCHOOL IN AFGHANISTAN. TODAY 38 PERCENT ATTEND SCHOOL.'

en's rights and lives in their native country. After Sept. 11, she taught summers at Kabul University and worked for the nation's education ministry.

"The level of physical destruction there is extremely disturbing," she said. "What I am most concerned with is the cultural destruction – the destruction of the entire social fabric of Afghanistan."

She saw her appointment as an Afghan diplomat in 2006 as a new opportunity to contribute to the country's reconstruction.

The aim, she said, was to help show the German public that there is more to Afghanistan's heritage and history than the Taliban.

She also lobbied strongly for Germany to fund vocational education for unemployed youths in Afghanistan.

"You see thousands of young men on the street corners, without skills and job opportunities for the future," she said. "They need basic skills to participate in the rebuilding of their country. Education will be the way to make Afghanistan self-reliant and self-sufficient."

Realistically, she said, "That will take a generation."

More than 80 percent of that nation's population is illiterate, more than 88 percent of Afghan women are illiterate, life expectancy is 45, and more than 70 percent of the population still lives in rural, third-world conditions, she said.

But Zulfacar doesn't find those numbers entirely bleak.

"In 2001, only 3 percent of little girls attended school in Afghanistan. Today 38 percent attend school," she said. And women now make up 29 percent of Afghanistan's parliament. "Eight years ago, just for women to be a part of parliament would not be thinkable."

Some changes are more tangible to visitors, like the con-

struction of tall, modern buildings in Kabul. However, she said, living standards for rural villages or the urban poor remain largely unchanged.

Zulfacar is glad to have spent much of the past decade working to rebuild the country where she was born. But she is also glad to be back at Cal Poly after an extended sabbatical.

"I was really looking forward to my return to academia," she beamed on a recent afternoon as students streamed in and out of her office.

"The world has become so interwoven due to technology that it really is a global village. I try to teach that a good engineer or a good architect is not just about making good designs. It's about understanding who you are designing for, about understanding the people." □

### MORE ABOUT PROFESSOR ZULFACAR

#### A Life Revisited: Professor Maliha Zulfacar Returns to Afghanistan

Cal Poly Magazine Article, Summer 2002

[www.calpolynews.calpoly.edu/news\\_releases/2010/](http://www.calpolynews.calpoly.edu/news_releases/2010/January/Zulfacar-2002-Magazine.html)

[January/Zulfacar-2002-Magazine.html](http://www.calpolynews.calpoly.edu/news_releases/2010/January/Zulfacar-2002-Magazine.html)

#### Maliha Zulfacar: Teaching What She Lives

Cal Poly Magazine Article, Summer 2006

[www.calpolynews.calpoly.edu/news\\_releases/2010/](http://www.calpolynews.calpoly.edu/news_releases/2010/January/Zulfacar-2006-Magazine.html)

[January/Zulfacar-2006-Magazine.html](http://www.calpolynews.calpoly.edu/news_releases/2010/January/Zulfacar-2006-Magazine.html)

#### Afghan Professor Releases Award-Winning Documentary on DVD

[http://www.calpolynews.calpoly.edu/news\\_](http://www.calpolynews.calpoly.edu/news_releases/2008/March/Zulfacar_dvd.html)

[releases/2008/March/Zulfacar\\_dvd.html](http://www.calpolynews.calpoly.edu/news_releases/2008/March/Zulfacar_dvd.html)





# GOING BACK TO GO GLOBAL

AT 51, LORI ATWATER IS EARNING AN ENGINEERING DEGREE SHE HOPES WILL HELP HER CHANGE THE WORLD

BY MARY MCNALLY



THE MOTHER OF FOUR grown children, Lori Atwater had been successful as a union electrician, an information systems manager and self-employed technical consultant. But she traded it all in for dorm life and a meal plan.

At age 51, Atwater is a full-time resident of Poly Canyon Village, pursuing an engineering degree she abandoned 30 years earlier. At the time, as a young wife and mother, she thought that investing in her husband's degree would be enough. But she yearned for something more.

said. "There is a stark contrast between myself and the other students so it can be hard to relate to each other."

But she walked away from a comfortable income, a company car and other trappings associated with success because she didn't want money to drive her decisions. "You have to be true to your gifts," she said.

Since returning to school, she has gone global with Cal Poly's learn-by-doing philosophy. Last year, she was part of a team that took a bicycle-powered water pump to Malawi to help villagers become self-sufficient. She said it's important to design "for the planet" – places where the population doesn't have technical training and where clean-rooms don't exist. "That presents interesting design challenges."

'THIS REALLY IS THE BEST TIME. I NEVER WOULD HAVE GOTTEN AS MUCH OUT OF THE EXPERIENCE AS I'M GETTING RIGHT NOW.'

So she volunteered to join a single overseas aid mission with Mountainbrook Community Church in 2005 but it became a calling. In that year, Atwater traveled to Thailand and Indonesia to rebuild houses after a tsunami ravaged the area. She also journeyed to Malawi, one of the 10 poorest countries in the world, to help develop a subsistence church. The group encouraged her to "live the life you're wired for," said Thom O'Leary, the lead pastor. "Lori began to see the bigger scope of how she could make a difference in the world."

As she continued her travels, she recognized the gap between emergency response and the effort it really takes for sustainable international development and ultimately, her decision to return to school.

"It was a long, painful process to come back to school," she

The goal of the trip was to learn about Arab culture and language, explore the changing roles of women in the Arabian Gulf, and identify projects on which Cal Poly students can collaborate with international student partners.

Along those lines, she said the interdisciplinary, hands-on opportunities at Cal Poly are invaluable, "They're real-world adventures with social science, biology, finance and engineering." Part of the pain of returning to school was realizing what a perfect fit engineering had been for her 30 years earlier, she said. Then again, her life experience has equipped her to take a more proactive role in her education, engaging professors in the classroom and creating opportunities that enhance her studies. "This really is the best time," she said. "I never would have gotten as much out of the experience as I'm getting right now." □





# MUSTANG MENTORING MAGIC

BY KIM GANNON

WHEN CAL POLY ASKS ALUMNI to give back, they do, particularly when they're asked to help students. One recent example is Mustang Mentoring Day.

Piloted as a partnership with the Cal Poly Alumni Association and the College of Engineering, nearly 100 students participated in Mustang Mentoring Day in November. Alumni were asked to volunteer and share with current students the things they have learned in the workforce.

Alumni and students were designated into groups for some team-building exercises and general conversation about careers, career preparation and questions about life after Cal Poly.

Students and alumni then rotated through one-on-one meetings to meet as many other individuals as possible within a short timeframe. After lunch, students were given more time to talk with those with whom

they'd felt strong connections.

Follow-up after the day was left to students. According to alumni feedback, students are keeping in touch.

The event drew alumni from all generations. One participant said it was the first time he had been back on campus since graduating. Most agreed to attend because they saw it as a great way to give back and help current students.

"Students are courteous and eager to learn," one mentor said. "I enjoyed helping them and sharing my experience."

Students who participated raved about how the experience allowed them to meet alumni and ask general work questions and queries related to specific programs and career paths.

Although the first Mustang Mentoring Day was targeted for engineers, participants from all colleges and majors were welcome. Plans are under way for more Mentoring Days, so watch your e-mail for announcements.

Mechanical Engineering student David Hohn speaks with a mentor.

# 31 YEARS

IN SUPPORT OF LEARN BY DOING

*Warren J. Baker*



"IF I COULD, I WOULD DO IT ANOTHER 31 YEARS."

FOR ALL THE CAL POLY STUDENTS who wished they could have spent just a little more time on the Cal Poly campus, President Warren J. Baker has lived their dream.

"I'm often asked what has kept me in this job for 31 years," Baker told us recently. "It's simple. It's the joy that comes from being part of transforming lives. That's fundamentally what we do at Cal Poly; we transform lives. We help academically motivated students become resourceful professionals, and what a privilege it has been to be part of that process for literally tens of thousands of students."

"If I could, I would do it another 31 years."

In preparing this special section, we had the pleasure of asking President Baker and his wife Carly Fitzsimons Baker to reflect on their 31 years of service to Cal Poly.

We also enjoyed combing through the archives to present some of the facts and figures that show just how remarkable President Baker's tenure has been.

Here's the number that impresses us the most – 102,237. That's the number of bachelor's and master's degrees awarded since Warren Baker became president of Cal Poly in 1979. That's 102,237 lives transformed.

And next month we can add the Class of 2010. □

— Matt Lazier, *editor*

President Baker (center) talks with Chemistry senior Mira Elan (at the microscope), Microbiology senior Fady Ghalil (blue shirt) and Microbiology senior James Chen at Cal Poly's Environmental Biotechnology Institute. (Photos by Aaron Lambert)

(Timeline photos - University Archives and Cal Poly Magazine staff)



# CONVERSATION

WITH CAL POLY PRESIDENT **WARREN BAKER**

BY MATT LAZIER



WARREN J. BAKER became the eighth president in Cal Poly's history in August 1979. Three decades later, there has yet to be a ninth.

It has been three decades of remarkable growth for Cal Poly, during which time Baker has presided over the graduation of more than 100,000 students, overseen dramatic expansion and improvement of campus facilities to nurture learn-by-doing programs, and led the university as it gained a national reputation for excellence, reaping innumerable honors and recognitions, including an ongoing streak of 17 years as U.S. News & World Report's best public master's-level university in the west.

And Baker steered Cal Poly toward greater support from industry, alumni, and friends, leading what became a record-breaking \$264 million Centennial Campaign.

What Baker says makes him most proud is that throughout his tenure, whatever the issue, he stayed focused on preserving and enriching the learn-by-doing educational model that is Cal Poly's beating heart.

As Baker prepares to retire, Cal Poly Magazine sat with him for a discussion of his time here and what he sees as the university's future challenges.

## WHAT FIRST ATTRACTED YOU TO CAL POLY IN 1979?

It appeared to me that Cal Poly was a university in transition – expanding on its agricultural roots to become a true poly-

technic campus, and with tremendous potential and the very realistic goal of becoming a nationally recognized polytechnic institution.

## WHEN YOU BECAME THE PRESIDENT, WHAT WERE YOUR FIRST GOALS? HOW DID YOU SET ABOUT IMPLEMENTING THEM?

We needed more resources – more support for learn-by-doing, new programs and new buildings to support student success. But I wasn't sure how that was going to occur.

For the physical campus, we first looked primarily to the state. I spent a lot of time getting to know people in Sacramento and making our case with legislative leaders from places outside San Luis Obispo. Because we had so many students from other legislative districts, we were able to get those legislators to testify on behalf of Cal Poly. Success came quickly for us in the capital programs, and we've been able to continue that.

Later, we realized there was tremendous advantage in leveraging private funds to get state money for campus projects. We did it the other way as well, where state funds helped us leverage private money.

I knew we would succeed, but if you had told me that we would add close to \$1 billion dollars in facilities over three decades, I would have said, "That's not possible." But when students, alumni, faculty and staff pull together, almost anything is possible.

There also was opportunity for development of academic programs. We were growing, hiring new faculty. That presented opportunities to introduce new majors that fit the polytechnic mission and ensured that students would have a broad education preparing them to compete in scientific and

technical fields and also be well versed in the humanities and social sciences. We've added 20 new undergraduate majors, 72 minors and 15 new master's degree programs over the years. I believe that's helped make it possible for us to graduate so many resourceful professionals who go on to successfully enrich their professions and their communities.

## WHAT DO YOU THINK HAS BEEN YOUR GREATEST SUCCESS AT CAL POLY, AND WHY?

We've done well at maintaining the focus on the learn-by-doing education model and garnering the support to enhance the opportunities for our students around that philosophy. I think we're an even better institution today than we were 30 years ago, and we have stayed true to the mission established by Cal Poly's founders in 1901.

When I first met Al Smith, he told about how the learn-by-doing education he received at Cal Poly influenced his life and his career. He wanted to explore with me how he might give something back to the university to help preserve learn-by-doing. Over the next few years we put in place a program that gave students and faculty an opportunity to use his wonderful 3,200-acre ranch, Swanton Pacific, to practice what they learned in the classroom. The experiment was very successful, and today Cal Poly owns Swanton Pacific Ranch, supported by a generous multi-million dollar endowment provided by Al Smith. His dream lives on.

## LEON PANETTA

CIA director and former 16th Congressional District representative

*"Warren Baker has demonstrated both courage and wisdom in his leadership and has stayed true to his principles. He has provided a steady hand and needed stability for Cal Poly during dire times of budgetary turmoil, resulting in consistent and far-sighted improvements in both curriculum and facilities. His achievements have positively impacted the lives of thousands of students in California and across the nation."*



**May 22, 1979**  
CSU Board of Trustees names Warren J. Baker as Cal Poly's eighth president.

**Aug. 22, 1979**  
Baker takes the reins of the university, becoming the youngest campus president in CSU history.

**Fall 1979 quarter**  
Cal Poly's student enrollment is 14,684.

**1980**  
Baker establishes the President's Cabinet, an advisory group of industry, government and community leaders.

**Fall quarter 1980**  
Enrollment jumps to 16,048.

**1983**  
President Ronald Reagan appoints Baker to the Board for International Food and Agricultural Development (USAID).

**Fall 1984**  
Nearly 9,000 apply for admission to Cal Poly.



**1985**  
New engineering building (Building 13) is completed.



**1985**  
President Reagan appoints Baker (with Senate confirmation) to the National Science Board, the governing body for the National Science Foundation. Baker was reappointed in 1988, serving nine successive years.



**1988**  
The Agricultural Sciences building is completed.

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In recent years, our learn-by-doing model has been enriched with greater emphasis on project-based learning. Projects that engage teams of students, faculty and advisers from outside the university add a terrific dimension to learn-by-doing. Paul Bonderson, who credits his success as an entrepreneur to the hands-on education he received at Cal Poly, saw the importance of on campus facilities to support project based learning. He created the magnificent Bonderson Projects Center on campus and gave it to the university.

The learn-by-doing focus gave us direction in every initiative, whether it was raising money for facilities, putting together a capital campaign and a structure to raise private funds, or seeking support from the legislature for the polytechnic mission.

### WHAT ARE THE BIGGEST CHALLENGES FACING CAL POLY RIGHT NOW?

In many ways the challenges are similar to what I faced when I became president: how to preserve and enrich the quality of our learn-by-doing and project-based education. Bluntly, how do you pay for it?

The world and the problems we face are increasingly complex, and California's industries need resourceful professionals who can address problems in a strategic, whole-system way. That's the kind of innovative leader we are successful at educating. But to educate people across multiple disciplines requires new ways of teaching and learning that extend our basic model of learning-by-doing. Certainly we have opportunities today to use technology to make us more efficient. However, to sustain and enhance the quality of a Cal Poly education the university will have to continue to seek more support from sources other than the state.

Bear in mind that 30 years ago, the state paid 90 percent of the cost of educating a student. Today at Cal Poly, the state provides 50 percent. Students, their parents, and private support make up the difference.

Because of our polytechnic mission, Cal Poly has an even more difficult challenge. We have the highest proportion of higher-cost programs of any CSU campus. To maintain our learn-by-doing focus, it's a fact of life that it costs more to educate students in agriculture, architecture, engineering and science than it does in the liberal arts. Yet Cal Poly's per-student funding is at the average of all the CSU campuses. Meanwhile, the state has steadily been reducing its support for public higher education.

We have to continue to make our case for state support. We need to continue to grow our private support. And we need to continue to nurture the relationships and partnerships we have with the students that support the Cal Poly Plan.

Going forward, the Cal Poly Plan – the willingness of students and their parents to pay for the exceptional quality that our learn-by-doing philosophy provides – will allow Cal Poly a level of independence from the natural tendency of large bureaucratic systems to normalize the way in which campuses operate. There are both advantages and disadvantages to being in a large system. Cal Poly will need to continue to navigate

through these, and a strong partnership with the students, alumni and faculty is essential to success.

Today Cal Poly is one of the best values in the nation. As I see the competing demands for tax dollars in California and look to the future, it's clear Cal Poly will need to be successful at raising private support for endowments that will match the commitments of our students.

### THIRTY-ONE YEARS IS A LONG TIME ON ANY JOB. WHAT KEPT YOU MOTIVATED IN THIS ONE?

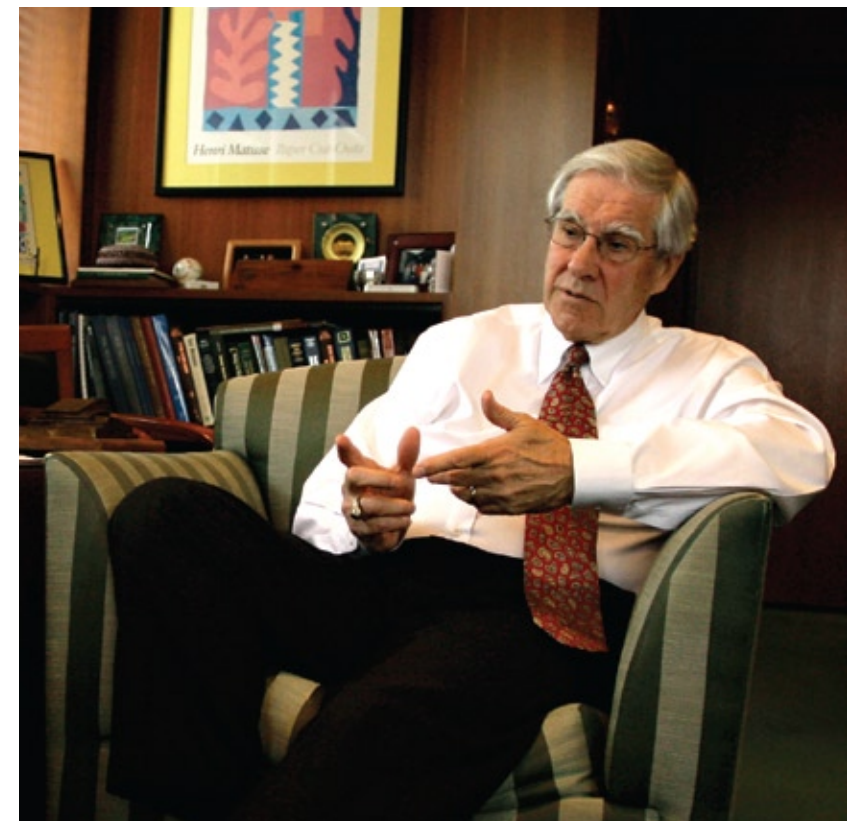
It never became routine. There were always new challenges, new things to accomplish. The university has been growing, which presented exciting opportunities and created an immense appeal: The students, faculty, staff, deans and administration were all growing and learning together.

And the campus is a very cooperative place to work. From the beginning, it was easy to engage the faculty, staff and students with a focused mission and a set of goals for the institution. Clearly we have had instances of differences of opinion in 31 years. But the campus is one that really works together. People are engaged, and their views are heard.

### HOW WOULD YOU LIKE YOUR TIME AT THE HELM OF CAL POLY TO BE REMEMBERED?

As being open and cooperative – that I helped create a spirit of cooperation on the campus and that we were able to work together to get things done. When we wanted to achieve something, we could overcome the barriers and do it.

I also hope I'm remembered for doing what I could to help garner the resources and support necessary to help students and faculty achieve their aspirations. I think of the presidency as more of a servant and facilitator role. It's a very simple thing we do here: We put good faculty together with good students, and good things happen. My role has been to try to support that. □



## REP. KEVIN MCCARTHY

U.S. 22nd Congressional District

*“Warren Baker’s leadership has been a key reason Cal Poly has earned an excellent reputation nationally. President Baker has been relentless in his focus on urging students and faculty to search for practical solutions to real-world problems. As a result, Cal Poly is a pre-eminent provider of the resourceful professionals that we need to keep California and America competitive in such fields as agriculture, engineering and architecture.”*

## REP. LOIS CAPPs

U.S. 23rd Congressional District

*“President Warren Baker has been an exceptional leader for Cal Poly and our community over the past three decades. I have watched with admiration as President Baker has guided the university to national recognition as an institution of higher learning and excellence. His tireless efforts have helped the university grow and become an invaluable source of innovative and well-rounded graduates that are vital to the future of California’s most important industries. It has been a pleasure working with him and his talented staff over the years, and I know he will be sorely missed by the entire Cal Poly family.”*

**April 30, 1990**

In the wake of a weekend of unrest near campus, Baker suspends Poly Royal, Cal Poly's 58-year-old open house showcase.

**Fall quarter 1990**

Enrollment climbs to 17,756 while first-time applications jump from 9,000 in 1984 to 15,600.

**Nov. 21, 1991**

Cal Poly students vote to increase their fees in order to maintain athletics at the university and move Cal Poly teams to NCAA Division I.



**1992**

Construction is completed on the new Business Building and a remodel of the Education Building.

**1993**

Alumnus Al Smith, founder of Orchard Supply Hardware, donates his 3,200-acre Swanton Pacific Ranch near Santa Cruz to Cal Poly, along with \$12 million for an endowment to support hands-on learning at the ranch.

**Oct. 4, 1993**

U.S. News & World Report ranks Cal Poly as the best public-master's university in the west for the first time.

**1994**

The Athletics Program moves to Division I competition.

**April 1994**

At the initiative of student leaders, following the 1990 suspension of Poly Royal, Cal Poly relaunches its annual spring showcase event as Open House and the Poly Royal Rodeo.

**July 10, 1996**

CSU trustees endorse the Cal Poly Plan and Chancellor Munitz subsequently approves implementation of a special Cal Poly academic fee in support of the plan.



**September 1996**

The Performing Arts Center's Christopher Cohan Center holds its grand opening performance festival.



**1999**

The College of Engineering opens its Advanced Technologies Laboratories building, the first building on campus constructed without state funding.

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AMBASSADOR, SCHOLAR, MOTHER, SUPPORTER

CARLY FITZSIMONS BAKER HAS WORN MANY HATS IN 31 YEARS AT CAL POLY

BY MATT LAZIER

CARLY FITZSIMONS BAKER is an elegant force of nature who has worked tirelessly on behalf of Cal Poly for more than three decades.

She has served as a confidante to the president, ambassador for the university, scholar in its classrooms, and hospitality coordinator for some of the most significant social events in Cal Poly's history.

Her efforts prompted Congresswoman Lois Capps to read a letter into the congressional record in April 2001:

"Carly's grace, good humor and attention to detail have been evident in every event for visiting dignitaries, university board members, community leaders, donors and the President's Cabinet," Capps wrote. "The welcoming environment she has created has nourished an expanding circle of university friendships, critical to Cal Poly's future."

Baker's renowned sense of style can be seen across the university - in the bright, modern Cal Poly entry banners, the colorful landscaping around the Performing Arts Center, the symbolically rich campus seal, and many other features that enrich campus daily life and add a touch of elegance to university ceremonial occasions.

And she raised four college graduates while managing a home that was open to visitors from around the world.

IMMEDIATE NEED

Baker remembers when she and her family arrived on campus in August 1979. She was raising four children, ages 3 to 16 and was suddenly thrust into the role of campus ambassador.

"We immediately had all the initial meet-and-greet events, as well as the regular fall events that happen when school starts up every year," she said. "I really had to work to get things in shape."

Warren Baker said he had an immediate and pressing need for his wife's support as he assumed the Cal Poly presidency.

"When we came here, we made it a priority to ensure that members of the Central Coast community felt welcome on campus," he said. "What Carly worked hard to do was to find some early opportunities to connect with the community."

PROFESSIONAL DEVELOPMENT, COMMUNITY OUTREACH

As the Bakers settled in, Carly Baker decided to continue her education - earning a master's degree in education at Cal Poly in 1985. She worked on several local and statewide boards and commissions relating to social issues, including the Children's Center Task Force, Children's Protective Services Task Force, Women's Shelter Board of Directors, and Juvenile Justice and Delinquency Prevention commissions.

After earning her degree, she did an internship with Atascadero State Hospital, an institution that houses the criminally insane about 20 miles north of the Cal Poly campus.

"I had always worked with victims of crime," Baker said. "I wasn't sure whether I could work with the perpetrators, so I took this internship."

The work was initially frightening and somber, Baker said. Eventually, though, she could get past the patient's crimes and learn their stories - many of them heart-wrenching.

After her internship, Baker served on the statewide advisory board for Atascadero State Hospital (more than once as chairwoman) and then on the statewide Organization of State Hospital Advisory Boards.

Her involvement reflected a personal and professional commitment and an understanding that the health of California's citizens was a critical precondition for making progress on education issues.

'DO WHAT FEELS RIGHT'

More directly related to Cal Poly was her work with the Foundation for the Performing Arts Center and the effort to build the PAC - which she cites as one of her proudest accomplishments.

The foundation - a partnership between the university, the city and the private sector - launched in 1986; the gleaming Performing Arts Center opened a decade later. Many involved in the effort say Baker played a key role in its success.

"Her passion for the arts and for the Performing Arts Center was always front and center," said Warren Sinsheimer, the

WILLIAM H. SWANSON

Chairman and CEO, Raytheon Company

"As an alum and member of the President's Cabinet, I have witnessed firsthand the tremendous impact Warren Baker has had on the future of so many students and members of the faculty. His dedicated leadership has contributed immeasurably to Cal Poly's world-class educational reputation and to its distinctive learn-by-doing approach. His work has nourished a culture where it is safe to dream and where challenges are regarded as opportunities for development and success. He has challenged all of us to make it better for those who follow us."

first president of the PAC foundation board. "Carly offered insights that were often keenly important; she recruited other volunteers; she raised money; she planned events and dove in and made sure they succeeded."

Today, Baker and others continue to raise money for ongoing maintenance and upgrades.

Baker brought the same work ethic to planning campus events, such as the opening and closing celebrations of the Centennial Fundraising Campaign. In organizing those events, she was never afraid to roll up her sleeves and do the work - moving tables, putting out linen and decorating.

"I only like small committees - a few people who are there ready to work," Baker said. "You've got to be ready to get your hands dirty, if you want it to be the way you want it to be."

The way she has always wanted it is elegant and stylish, with no detail overlooked in pursuit of helping the university put its best foot forward.

"If you're going to do it, it should be nice," Baker said. "You should do the best job you can."

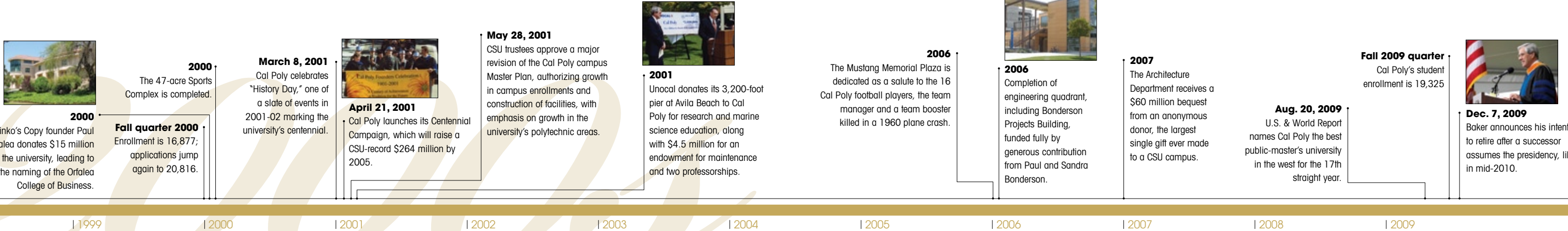
After implementing her vision so successfully over the years, does she have any advice for the next president's partner?

"It would be pretentious of me to offer any, because it's a very personal thing," she said. "It's important that they be their own person - approach the role how they see fit and do what feels right to them." □

JACK O'CONNELL

California State Superintendent of Public Instruction

"Under President Baker's remarkable and visionary leadership over the past 30 years, Cal Poly has made great strides toward becoming one of the best public universities in the nation. The imprint of his legacy will live on through the work of Cal Poly's staff and the tens of thousands of students who graduated with technical and other degrees and currently have successful careers in our hypercompetitive global economy."





# BY THE NUMBERS

## THE WARREN BAKER ERA

by the numbers

**6** – Number of U.S. Presidents occupying the White House since Warren Baker assumed the Cal Poly presidency in 1979.

**102,237** – Total number of bachelor's and master's degrees Cal Poly has awarded since Baker assumed presidency (excluding the upcoming Class of 2010).

**17** – Number of consecutive years (including 2009-10) that U.S. News & World Report has rated Cal Poly as the best public-master's university in the West.

**1** – Current ranking of Cal Poly's endowment among the CSU's 23 campuses (\$131 million in 2009).

**14,684** – Cal Poly's student enrollment in Fall 1979, when Baker took the helm.

**19,325** – Cal Poly's student enrollment Fall 2009.

**8,799** – Number of applicants to Cal Poly for Fall 1984.

**41,000** – Approximate number of applicants to Cal Poly in Fall 2010, competing for about 3,900 spaces.

**3.91** – Average grade-point average for first-time Cal Poly freshmen for Fall 2010.



**74** – Percentage of the 3,011 Cal Poly students who enrolled in 2003 and who graduated within six years — a record high for Cal Poly and the best graduation rate in the California State University System.

**89** – Percentage of 2007-08 grads who were employed full time or enrolled in graduate school one year of graduating from Cal Poly.

**3,200** – Number of acres in the Swanton Pacific Ranch, near Santa Cruz, which alumnus Al Smith bequeathed to Cal Poly in 1993 bringing Cal Poly's total land holdings to 9,678 acres.

**46** – Number of new buildings/facilities added to campus during Baker's tenure, including construction projects now under way.

**20** – Number of new majors introduced for undergraduates during Baker's tenure.

**68** – Number of bachelor's degree programs offered at Cal Poly as of 2010.

**15** – Number of new master's degree programs introduced during Baker's tenure.

**29** – Number of master's degree programs offered at Cal Poly as of 2010.

**19** – Number of centers and institutes established during Baker's tenure.

## GARY BLOOM

CEO of eMeter Inc. and past chairman of the Cal Poly Foundation Board

*"Cal Poly receives very generous support from students, parents and alumni, as well as the university's many industry partners, because they know that Cal Poly is delivering a student experience that builds confident, resourceful professionals and, ultimately, innovative leaders in their field. President Baker's tireless work over the years has been to make sure the student experience is challenging and relevant to what will be expected of students when they begin their professional careers."*

# ALUMNI

## IN THE NEWS

### > ENGINEERING ALUM MOVES THE EARTH CLOSER TO PRIVATE SPACE FLIGHTS

BRITISH MILLIONAIRE RICHARD BRANSON and alumnus and aviation pioneer **Burt Rutan (B.S., Aero Engineering, 1965)** are taking deposits for space flight tickets on their Virgin Galactic spaceline. In January, they unveiled their new rocket, dubbed SpaceShipTwo, and its carrier aircraft, VMS Eve, at an airport in the Mojave Desert. Instead of trying to launch a rocket directly into space, plans call for the carrier craft to lift SpaceShipTwo to an altitude of 50,000 feet. At that point, SpaceShipTwo – carrying six paying passengers and two pilots – would separate and blast off to about 325,000 feet, or 60 miles, above the Earth's surface. At that altitude, passengers experience weightlessness and see the curve of the Earth. Ticket price: \$200,000. □

### > ANIMAL SCIENCE ALUM IS PRESIDENT OF THE CALIFORNIA FARM BUREAU FOUNDATION

Modesto-area almond and walnut grower **Paul Wenger (B.S., Animal Science, 1979)** was elected president of the California Farm Bureau Federation in December. Wenger, 54, a third-generation family farmer, will assume the role of spokesman for the organization on a wide range of issues of interest to farmers around the state, including access to water and economic pressures. □

### > ENGLISH ALUMNA WRITES CRITICALLY ACCLAIMED BIOGRAPHY OF RAYMOND CARVER

Cal Poly alumna **Carol Sklenicka (English, 1971)** has written a critically acclaimed biography, "Raymond Carver." Scribner published the book in November. The book is Sklenicka's portrait of the iconic short-story writer. It was hailed as one of the top 10 books of 2009 in the New York Times Book Review. □

### > BUSINESS ALUM TRADES MAJOR LEAGUE BASEBALL POSSIBILITIES FOR THE PRIESTHOOD

Alum and former Mustang Baseball standout **Grant Desme (Business Administration, 2008)** made headlines in February by making a major career change: opting out of pro baseball to enter the priesthood. Desme walked away from the Oakland Athletics minor league team to become a Catholic priest. □



Cal Poly alum and aviation pioneer Burt Rutan.

### > VIT ALUMS' PALATE-CLEANSING BEVERAGE MENTIONED IN WALL STREET JOURNAL

What's the best way to cleanse the palate between wine tastings? It was a senior project question, and now it's a drink called SanTásti. And it was mentioned in February in a Wall Street Journal story on consumer wine tasting events and studies. Grads **Andrew Macaluso (B.S., Wine & Viticulture, 2008)** and business partner **Nicole Chamberlain (B.S., Wine & Viticulture, 2008)** are producing and marketing the drink in wine stores and tasting rooms. □

### > AG BUSINESS ALUM IS NAMED KERN CATTLEMAN OF THE YEAR

The Kern County CattleWomen's Association and the Kern County Cattlemen's Association honored **Jay Hershey III (B.S., Ag Business, 1968)** for his contributions toward advancing the beef industry's interests. Hershey, 64, and his wife own Rivermere Ranches at Deer Creek, an assortment of range ground in Edison and parts of Tulare County that they lease to Rube Cattle Co. Hershey has enjoyed a 25-year career as a commercial loan officer, followed by several more years as a financial adviser. He worked his family's ranch nights and weekends. □

### > BIOLOGY ALUMNA HELPS IN HAITI

Recent Cal Poly graduate **Heidi Swangler (B.S., Biological Science, 2009)** headed to Haiti in February on a medical mission in Port-au-Prince. Swangler, of Atascadero, assisted physicians from Oregon in a makeshift clinic beside a collapsed hospital. A volunteer with Virgin Islands nonprofit Haiti Community Support, Swangler held the hands of toddlers receiving stitches, created mixtures of sugar and salt to combat infant dehydration, and more. □

ALUMNI





(Photos courtesy of Rory Cooper.)

WHEN A YOUNG RORY COOPER (EE '85, Master's in EE '86) arrived at Cal Poly in a wheelchair, paralyzed from a cycling accident, his professors saw an engineering challenge.

Nearly a decade before the passage of the Americans with Disabilities Act, Electrical Engineering Professor Saul Goldberg and his colleagues modified the lab benches and classroom materials for Cooper, allowing him to fully participate in the curriculum. The result: an accomplished scholar, award-winning athlete, author and lecturer with an international audience, and a professional career that has impacted thousands of wounded veterans.

Cooper has never forgotten it. "That was the best part of my education at Cal Poly – Professor Goldberg fully embraced the notion of 'adapting the environment' and working

accordingly," he recalled.

Cooper was just 20 when he was hit by truck while cycling. The accident happened in Germany, where he was stationed in the U.S. Army.

His spinal cord was severely injured, leaving him paralyzed from the waist down. "The most challenging part of the recovery process was adapting to a new perception of myself – it takes longer to adapt emotionally," Cooper said. "The goal of my education at Cal Poly and athletics kept me going."

Cooper started with wheelchair basketball at Cal Poly, then moved on to wheelchair racing, building the racing chairs himself in the labs of the College of Engineering and his parents' automotive machine shop. State and national competitions followed.



# INNOVATE ADAPT OVERCOME

RORY COOPER LOOKS FORWARD  
AND SERVES A GENERATION

BY SCOTT ROARK

In 1987, Cooper set a world record in the 10,000-meter wheelchair racing event. A year later came the 1988 Paralympic Games in Seoul, Korea, where he won a bronze medal.

He has five gold medals from the 2010 National Veterans Wheelchair Games, winning medals each year since competing beginning 1983.

Cooper is still active with Paralympics. In 2008, he served as an adviser for the U.S. Paralympic Team. And you may have seen

and Manipulation," both of which have been translated into Japanese and Chinese. Cooper latest work, "Care of the Combat Amputee," was just released. He co-edited the volume with Col. Paul F. Pasquina of the Walter Reed Army Medical Center.

Cooper also lectures throughout the world. He was named "Honorary Professor" at The Hong Kong Polytechnic University and Xi'an Jiaotong University. He has 10 patents awarded or pending.

In remarks to the U.S. House of Representatives last year, late

'THE MOST CHALLENGING PART OF THE RECOVERY PROCESS WAS ADAPTING TO A NEW PERCEPTION OF MYSELF – IT TAKES LONGER TO ADAPT EMOTIONALLY... THE GOAL OF MY EDUCATION AND ATHLETICS KEPT ME GOING.'

him last year while you were eating breakfast; he was featured on a Cheerios cereal box in recognition for his achievements.

His professional career is just as impressive. He is the founding director and senior research career scientist of the Veteran's Affairs (VA) Rehabilitation Research and Development Center of Excellence in Pittsburgh. Cooper splits these duties with being a distinguished professor at the University of Pittsburgh, focusing his research on physical medicine, rehabilitation engineering and orthopedics.

Cooper has published more than 225 peer-reviewed journal articles and two books, "Wheelchair Selection and Configuration," and "Rehabilitation Engineering Applied to Mobility

Congressman John Murtha called Cooper "an inspiration."

And Cooper's journey started at Cal Poly: studying in the labs, organizing wheelchair racing events on campus, working on the Rose Float and the Human Powered Vehicle.

A San Luis Obispo native, Cooper misses his hometown and the university nestled against its mountains. He had a chance to visit recently, though, when he served as the guest of honor and speaker for the 2010 Electrical Engineering Department Banquet on May 14.

"It's a spectacular learning environment; it really is a special place," he said. "It supported me when I strove to be forward-thinking and move on with my life." □



A L U M N I

# Q & A

## BUBBA MURARKA, INSIDE FACEBOOK

BY TERESA MARIANI HENDRIX



**NEEL “BUBBA” MURARKA (B.S., Computer Science, 2000, M.S., Computer Science, 2003)** has friends in high places – lots of them. At Cal Poly, he was the student representative on the California State University Board of Trustees and a board member for Associated Students Inc. Now, Murarka is a Business Development Manager at Facebook, the Web’s mushrooming social network with more than 400 million active users around the world.

Alumni can connect on Facebook at [www.Facebook.com/calpoly](http://www.Facebook.com/calpoly). Parents and current students on Facebook can connect with Cal Poly at [www.Facebook.com/californiapolytechnic](http://www.Facebook.com/californiapolytechnic). Fan those pages and help Cal Poly top rival schools’ numbers.

Alumni: be sure to log in to PolyLink, as well, at [www.calpolylink.com](http://www.calpolylink.com). It’s the university’s free social network, where you’ll find 50,000 alumni contacts, more than 100 alumni career mentors, and an interactive Google map of 14,000 PolyLink users (to zip code level only). If you are an alum but aren’t in PolyLink, your private first-time login code is printed on the label of this magazine next to your name.

Log in today, because you can never be too social. Ask Murarka: he has more than 500 friends and connections in multiple social networks.

**Q: WHAT DO YOU DO ON THE JOB AT FACEBOOK?**

**A:** A typical day involves meeting with key strategic partners to discuss collaboration opportunities, working with internal team members to evaluate partnership concepts and ensuring existing partnerships are running smoothly. Some of the best parts of my job involve meeting with great new startups building on Facebook Platform and working closely with Facebook’s incredible product development teams to understand their plans for the coming months.

**Q: WHAT DO YOU LIKE BEST ABOUT YOUR JOB?**

**A:** It is tough, but nothing is as rewarding as working through super complex product, business and customer issues to find solutions to very difficult problems. I really love working closely with the great people from Facebook and our strategic partners.

**Q: WHAT DID YOU DO BEFORE YOU JOINED FACEBOOK?**

**A:** I ran my own startup, worked at a venture capital firm as an entrepreneur in residence and helped develop early versions of Bing.com for Microsoft.

**Q: WHAT’S YOUR ADVICE TO SOMEONE WHO IS NOT IN A SOCIAL NETWORK ON WHY THEY SHOULD JOIN ONE?**

**A:** Try it – you’ll find you probably like and benefit from it. You can always remove your account if you don’t.

**Q: YOU HAVE MORE THAN 500 PERSONAL CONNECTIONS AND FRIENDS ON YOUR SOCIAL NETWORKS. HOW DO YOU MANAGE YOUR CONNECTIONS AND FRIENDS?**

**A:** I generally only accept connections from people I have met in person. From there I use the privacy tools that Facebook has built into the experience. They enable me to manage how I share information with my different types of connections.

**Q: WHAT’S YOUR ADVICE ON USING A WEB SOCIAL NETWORK TO HELP YOUR CAREER?**

**A:** Make sure to keep work history, personal projects and contact information up to date on your social network profile(s). Follow the golden rule and try to help people by facilitating introductions or following up with why you are not able to help. When you are looking for your next opportunity, always find a direct connection to a company you want to work for instead of relying on an online form to submit your resume. And stay connected with recruiters as a passive job seeker; you never know when the perfect opportunity might come knocking.



**Q: SHOULD ALUMNI BELONG TO MORE THAN ONE SOCIAL NETWORK?**

**A:** Facebook is designed to be a broad service, helping people connect with all those who matter in their life. When people have more specific needs — say, professional or job networking — they should also consider some of the networks designed for those specific purposes.

**Q: WHAT SHOULD YOU PUT ON YOUR SOCIAL NETWORKING PROFILES?**

**A:** What you post represents you. So the best advice I can offer is: Be thoughtful about what you say and who you are sharing it with, just like we all do in person. I tend to share interesting links I find and photos from my cell phone, and I ask for recommendations via status updates. Other folks I am connected with write long notes, share their gaming scores or write funny pithy status updates.

**Q: HOW DID YOUR CAL POLY DEGREE PREPARE YOU FOR YOUR CAREER?**

**A:** In too many ways to count, but things that jump to mind include great technical understanding, confidence to work with anyone, and a willingness to jump in head first to solve problems.

**Q: WHAT WAS THE BEST CLASS YOU TOOK AT CAL POLY?**

**A:** Operating Systems II my senior year, where I built a network MP3 player with two lab partners in lieu of taking the final. It was so much fun to do something that hands-on and complicated.

**Q: WHO WAS YOUR FAVORITE PROFESSOR AT CAL POLY – AND WHY?**

**A:** I could spend days listing the names all of the professors and staff members who helped make me who I am. One person who was really impactful and who I continue to get great mentorship from is Dr. Baker. I’ll miss seeing him around campus when I visit, and I hope he enjoys his well-earned retirement. □



## CHAMITOFF AND STURCKOW ARE TWO OF THE THREE CAL POLY ALUMS WHO HAVE SOARED INTO THE HEAVENS.

BY SCOTT ROARK

ALUMS GREG CHAMITOFF AND RICK STURCKOW CONTINUE TO LEAVE THIS PLANET BEHIND

CHANCES ARE YOU'VE WATCHED science fiction movies with astronauts flying spaceships from Earth, living on space stations and admiring the view of our planet.

That science fiction is now science fact, as **Greg Chamitoff (EE '84)** and **Rick Sturckow (ME '84)** can both personally attest. The two astronauts have been among NASA's stars recently. And new adventures are on the horizon, with both involved in the final missions of the historic space shuttle program.

Chamitoff, who lived on the International Space Station (ISS) for nearly six months in 2008, is now going back, scheduled to launch on shuttle mission STS-134 this July to deliver an Alpha Magnetic Spectrometer (AMS). The AMS is a \$2 billion physics experiment built by 15 countries to examine fundamental issues about matter and the origin and structure of the universe. The shuttle mission will also deliver micro-meteorite shields and spare parts for Dexter, a robot on the outside of the station that acts as the "hand and fingers" for routine exterior maintenance.

Chamitoff will not stay on the ISS during this mission. However, he will perform his first spacewalk outside the station, an experience he calls "a lifelong dream." He will return



(Photos courtesy of Nasa.)

to Earth after 10 days. The flight is one of the last in the shuttle program, scheduled to be decommissioned this year. Russian Soyuz rockets will be the primary mode of transportation for all trips to the ISS after the shuttle program is shut down.

The Montreal native was selected to become an astronaut in 1998 and qualified for his flight assignment as mission specialist in 2000. As an undergraduate student at Cal Poly, Chamitoff taught lab courses in circuit design and worked summer internships at Atari Computers and IBM.

Meanwhile, Sturckow has been the commander and pilot of four shuttle missions -- the most recent last year aboard the shuttle Discovery on a supply mission that delivered, among other things, a treadmill to the ISS that was named after popular television comedian Stephen Colbert.

Sturckow's first journey into the heavens was a historic mission in 1998, behind the throttle of Space Shuttle Endeavour.

The shuttle was carrying the first two modules of the Interna-

tional Space Station, later joined together in orbit. Each circular module is 45 feet in length, 15 feet in diameter with windows to admire the view. Additional modules were later connected during subsequent missions. Solar panels provide power. A crew has permanently manned the station since 2000.

Sturckow is still playing an active role at NASA, now serving as a CAPCOM, or capsule communicator, for Mission Control. He acts as the "voice" for the flight control team on the ground when talking to an onboard crew.

The Lakeside, Calif., native came to Cal Poly because of off-road racing, competing in professional off-road races in Arizona, Nevada, and Baja California and gaining experience in leadership and project management. He joined the Marines after graduating, serving as an F/A-18 test pilot before he became an astronaut.

Chamitoff and Sturckow are two of the three Cal Poly alums who have soared into the heavens. **Robert "Hoot" Gibson (AERO '69)** flew on five space shuttle missions between 1984 and 1995, the last one as commander on the first shuttle mission to dock with Mir, the Russian Space Station. Gibson retired from NASA in 1996. □



# MAKING YOUR DOLLARS MAKE SENSE

## ESTATE PLANNING CAN BE TAXING

BY WARREN SINSHEIMER



THERE ARE MULTIPLE GOALS for estate planning, chief among them to provide for your loved ones and protect your heirs from unnecessary estate taxes.

For those committed to the transformative value of education, it can also be an important opportunity to plan a gift to Cal Poly – to enhance the institution, support the next generation of students and perpetuate Cal Poly's learn-by-doing credo into the future.

Even in the best of times, estate planning can be a challenge. When tax laws have changed, and indecision and uncertainty reign on Capitol Hill, it can be truly taxing.

WHEN TAX LAWS HAVE CHANGED, AND INDECISION AND UNCERTAINTY REIGN ON CAPITOL HILL, IT CAN BE TRULY TAXING.

The good news is that combining estate planning with proactive financial management can help defray current tax liabilities.

One of the significant changes in tax law relates to Roth IRAs. Contributions are made with after-tax funds, so after five years and a minimum age of 59½, investors can withdraw both the capital and appreciated assets tax-free.

This year, and possibly only this year, Congress eliminated income ceilings that prevented people with higher incomes from participating. Through the end of the year at least, any investor can convert a traditional IRA to a Roth IRA.

The downside of converting an existing IRA is that the investor will have to pay regular income tax on the amount being converted. That can be a costly undertaking for anyone, especially those in higher tax brackets.

Despite the tax hit, investors are taking a close look at this opportunity. Before acting, though, it's a good idea to take a comprehensive review of long-term goals. For those who want to remember Cal Poly in their estate plans, it might actually be more tax efficient to name Cal Poly as a beneficiary of the existing IRA (or a portion of it), rather than convert it to a Roth and incur the tax liability.

For those who have a longer horizon before retirement, there may be a bigger benefit to the conversion. If so, there are giving vehicles that help offset the tax liability. For instance, a Charitable Gift Annuity may provide some immediate tax savings, as well as tax-advantaged retirement income and on-going support for Cal Poly.

This confluence of factors presents an unusual opportunity to confer with your financial advisers and the planned giving professionals at Cal Poly to determine an optimal strategy for your particular situation.

For more information, contact the Planned Giving Department at 805-756-7125 or [plannedgiving@calpoly.edu](mailto:plannedgiving@calpoly.edu). □

Warren Sinsheimer specializes in trust and estate planning and administration, taxation, fiduciary litigation and charitable giving with the law offices of Sinsheimer Juhnke Lebens & McIvor. A past president of the San Luis Obispo County Bar Association, Sinsheimer was president of the Foundation for the Performing Arts Center from its inception in 1986 until 1996 and currently serves as a director on the Cal Poly Foundation.

# WILLPOWER

**PREPARING A WILL OR A TRUST** is far more than just a legal mechanism to provide for your loved ones and protect them from unnecessary estate taxes. It's also an opportunity to invest in causes close to your heart.

Our planned giving experts can help alumni and friends like you to make a real and tangible difference in the world. We can help you leave a lasting legacy that will support the next generation of successful Cal Poly alumni.

Let us assist you in identifying tax-advantaged strategies to support programs worthy of your investment. Remembering Cal Poly in your estate planning is an effective way for you to support learn-by-doing, the cornerstone of a Cal Poly education.

For simple language you can share with your tax adviser, visit: [www.plannedgiving.calpoly.edu](http://www.plannedgiving.calpoly.edu) or contact one of our professionals at:

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"JUNGLE CUTS," the float built by students and volunteers from Cal Poly San Luis Obispo and the university's sister campus in Pomona, captured two awards at the 2010 Tournament of Roses Parade, held Jan. 1 in Pasadena, Calif.

Parade judges honored the float with the Bob Hope Humor Trophy the day of the parade. And on Jan. 2, the Tournament of Roses and KTLA TV in Los Angeles announced that the Cal Poly creation had once again captured the annual Viewers Choice Award. The Cal Poly float also won the inaugural Viewers Choice Award in 2009.

The Jungle Cuts concept took a classic barbershop scene and set it in the jungle. The design by Andrea Swanson and Rick Stover of Thomas Baak and Associates, LLP played off the 2010 Tournament of Roses parade theme, "A Cut Above the Rest." □